

CLAIMS

1. An image processor comprising object image generating means for generating an object image of an object that is associated with a predetermined event, and image combining means for superimposing said object image on top of a mirrored video image feature that includes an image of an operator as a portion thereof to generate a combined image, the image processor being adapted to provide production of the combined image on a predetermined display device,
the image processor comprising detection means for detecting the position of the image of said operator included in said mirrored video image feature;
said image combining means being adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed in an area that an image of a hand of said operator can reach, depending on the position of the image of said operator detected by said detection means.

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2. The image processor as claimed in Claim 1 further comprising image acquisition means for acquiring a video image feature that includes an image of said operator as a portion thereof captured with a predetermined image capturing device, from the image capturing device; and
image reversing means that mirrors the acquired video image feature to generate said mirrored video image feature.

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3. The image processor as claimed in Claim 1 wherein said detection means is adapted to detect the position of the face of the operator in the image of said operator, and
said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed in an area suitable to the detected position of the face.

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4. The image processor as claimed in Claim 1, wherein said detection means is further adapted to detect the size of the image of said operator, and
said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed with
5 the size suitable to the detected image of said operator.
5. The image processor as claimed in Claim 1, wherein
said image combining means is adapted to combine an image representing a marker that indicates that the operator has detected, at the position of the image of said
10 operator detected by said detection means.
6. The image processor as claimed in Claim 1 further comprising
means for generating a motion image map, the motion image map being obtained by layering images of difference that represent the difference in images
15 between frames of said mirrored video image feature,
said image combining means being adapted to determine an area where said object image is to be combined, depending on the motion of the image of said operator determined on the basis of this motion image map.
- 20 7. The image processor as claimed in Claim 1 comprising means for detecting change in color of each area between frames of said mirrored video image feature,
said image combining means being adapted to determine an area where said object image is to be combined, depending on the motion of the image of said operator determined on the basis of the change in color.
- 25 8. The image processor as claimed in Claim 1, wherein, when said mirrored video image feature contains images of multiple candidate operators who can be an operator, said detection means is adapted to detect the position of an image of a candidate operator for each of said multiple candidate operators, and

said image combining means is adapted to combine said object image and said mirrored video image feature in such a manner that said object image is displayed in a range that the images of the hands of the individual candidate operators can reach, depending on the positions of the images of said multiple candidate operators detected
5 by said detection means.

9. The image processor as claimed in Claim 8 further comprising means for selecting, when said object image is accessed, the image of the candidate operator who has accessed the object image, as the image of said operator, and
10 display control means for zooming, panning and/or tilting the image of the selected candidate operator.

10. The image processor as claimed in Claim 9 wherein said display control means is adapted to do zooming, panning and/or tilting of the image of the selected candidate
15 operator by digital processing.

11. The image processor as claimed in Claim 9 wherein said display control means is adapted to do zooming, panning and/or tilting of the image of the selected candidate operator by controlling the image capturing device for capturing said mirrored video
20 image feature.

12. The image processor as claimed in Claim 8 further comprising means for selecting, when said mirrored video image feature is a stereo image captured simultaneously from multiple different angles, the image of the candidate operator who
25 is displayed at the position closest to said object image in each of the images making up of the stereo image, as the image of said operator, and

display control means for zooming, panning and/or tilting the image of the selected candidate operator.

13. The image processor as claimed in Claim 12, wherein said display control means is adapted to do zooming, panning and/or tilting of the image of the selected candidate operator by digital processing.
- 5 14. The image processor as claimed in Claim 12, wherein said display control means is adapted to do zooming, panning and/or tilting of the image of the selected candidate operator by controlling the image capturing device for capturing said mirrored video image feature.
- 10 15. The image processor as claimed in Claim 8, wherein said object image generating means is adapted to generate multiple object images corresponding to the respective candidate operators, and
said image combining means is adapted to combine said multiple object images and said mirrored video image feature in such a manner that the respective object images are displayed in a range that the image of the hand of the candidate operator can reach, for each image of the candidate operator.
- 15 16. The image processor as claimed in Claim 15 further comprising means for selecting, when either one of the multiple object images are accessed, the image of the candidate operator corresponding to the object image, as the image of said operator, and
display control means for zooming, panning and/or tilting the image of the selected candidate operator.
- 20 17. The image processor as claimed in Claim 16, wherein said display control means is adapted to do zooming, panning and/or tilting of the image of the selected candidate operator by digital processing.
18. The image processor as claimed in Claim 16, wherein said display control means is adapted to do zooming, panning and/or tilting of the image of the selected

candidate operator by controlling the image capturing device for capturing said mirrored video image feature.

19. An image processing method to be carried out by an image processor comprising image combining means for generating a combined image including a mirrored video image feature that includes an image of an operator as a portion thereof and object image of an object that is associated with a predetermined event, and detection means for detecting the position of the image of said operator included in said mirrored video image feature, the image processor being adapted to provide production of the resulting combined image on a predetermined display device,

said image combining means combining said object image and said mirrored video image feature in such a manner that said object image is displayed in a range that an image of a hand of said operator can reach, depending on the position of the image of said operator detected by said detection means.

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20. A computer program with which a computer to which a display device is connected is directed to form:

object image generating means for generating an object image of an object that is associated with a predetermined event;

20 image combining means for superimposing said object image on top of a mirrored video image feature that includes an image of an operator as a portion thereof to generate a combined image;

display control means for providing production of the resulting combined image on said display device; and

25 detection means for detecting the position of the image of said operator included in said mirrored video image feature;

and with which said image combining means is directed to provide a function of combining said object image and said mirrored video image feature in such a manner that said object image is displayed in a range that an image of a hand of said operator

can reach, depending on the position of the image of said operator detected by said detection means.

21. A computer readable recording medium on which a computer program set forth
5 in Claim 20 is recorded.

22. A semiconductor device integrated in a device mounted on a computer to which a display device is connected, thereby with the semiconductor device, said computer is directed to form:

10 object image generating means for generating an object image of an object that is associated with a predetermined event;

image combining means for superimposing said object image on top of a mirrored video image feature that includes an image of an operator as a portion thereof to generate a combined image;

15 display control means for providing production of the resulting combined image on said display device; and

detection means for detecting the position of the image of said operator included in said mirrored video image feature; and

20 said image combining means is directed to provide a function of combining said object image and said mirrored video image feature in such a manner that said object image is displayed in a range that an image of a hand of said operator can reach, depending on the position of the image of said operator detected by said detection means.